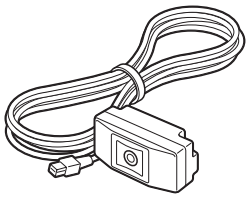
Pioneer *sound.vision.soul*

Service Manual



ND-BC1/E

ORDER NO.
CRT3267

UNIVERSAL REAR VIEW CAMERA

ND-BC1/E

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2004**
K-ZZA. APR. 2004 printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● Service Precaution

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

SPECIFICATIONS

Power source ..... 14.4 V DC
(10.8 — 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 130 mA
Output video ..... Mirror image
(for rear view confirmation)
Sensor ..... 1/4-inch color CCD sensor
No. of pixels ..... 491 (vertical) · 512 (horizontal)
(Effective no. of pixels roughly 250,000)
Lens .....Wide-angle,
focal length f = 1.94 mm, F value 2.8
Angle of view ..... Horizontal: approx. 112º
Vertical: approx. 82º
Iris system ..... Electronic iris
Scanning system ..... Interlace
Synchronizing system ..... Internal synchronization
Signal-to-noise ratio ..... 40 dB or more
(at the recommended intensity of illumination)
Horizontal resolution ..... Approx. 300 TV lines
Illumination range ..... Approx. 1.5 — 100,000 lux
Image output ..... 1 Vp-p (75 Ω)
Operation temperature range ..... –30ºC — +65ºC
–22ºF — +149ºF
Storage temperature range ..... –40ºC — +80ºC
–40ºF — +176ºF

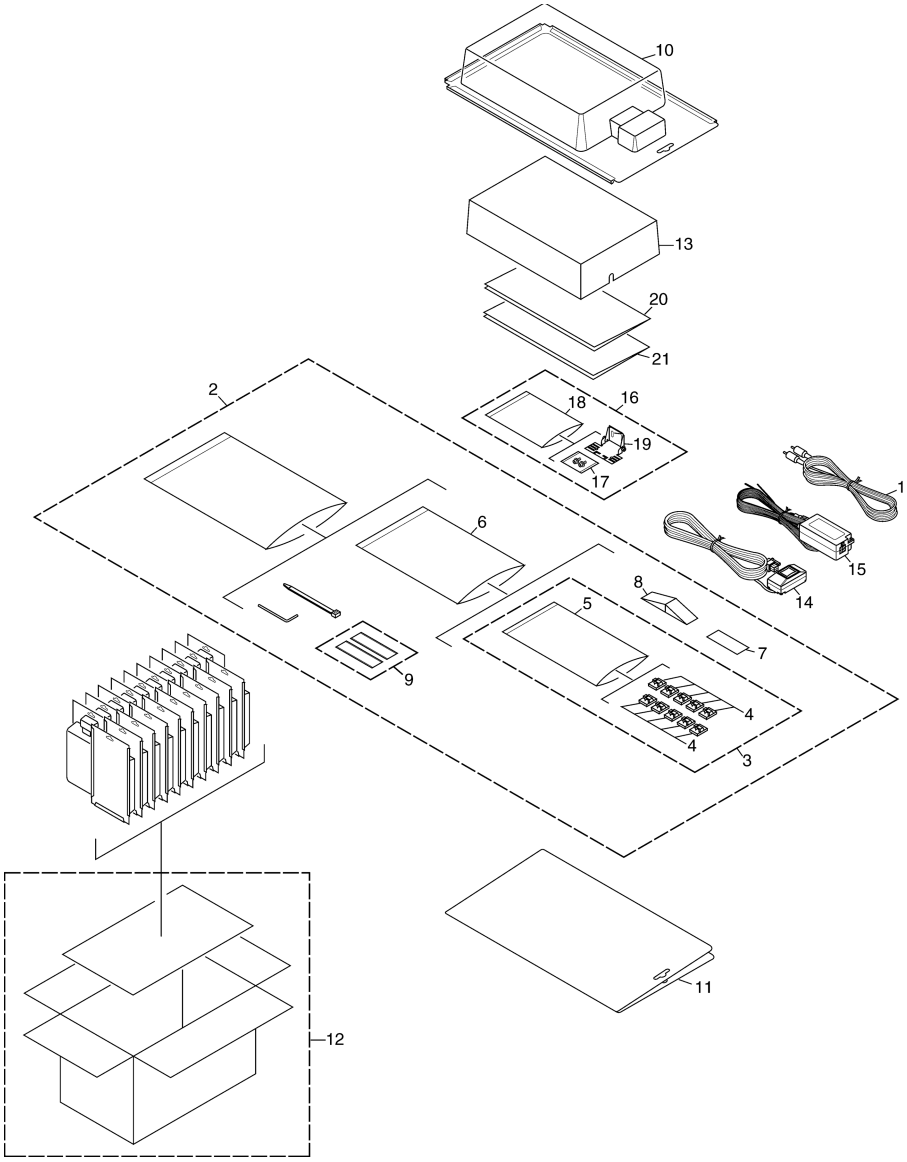
Dimensions
Camera unit .... 50 (W) × 25 (H) × 20.5 (D) mm
2 (W) × 1 (H) × 3/4 (D) in.
Power supply unit
..... 70 (W) × 35 (H) × 25 (D) mm
2-3/4 (W) × 1-3/8 (H) × 1 (D) in.
Weight
Camera unit ..... 120 g (0.3 lbs)
(including the cable)
Power supply ..... 150 g (0.3 lbs)
(including the power cord)

Note:
Specifications and the design are subject to possible modification without prior notice due to improvements.

EXPLODED VIEWS AND PARTS LIST

*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• Screw adjacent to▽mark on the product are used for disassembly.
• For the applying amount of lobricants or glue, follow the instructions in this manual.
(In the case of no amount instructions,apply as you think it appropriate.)

PACKING



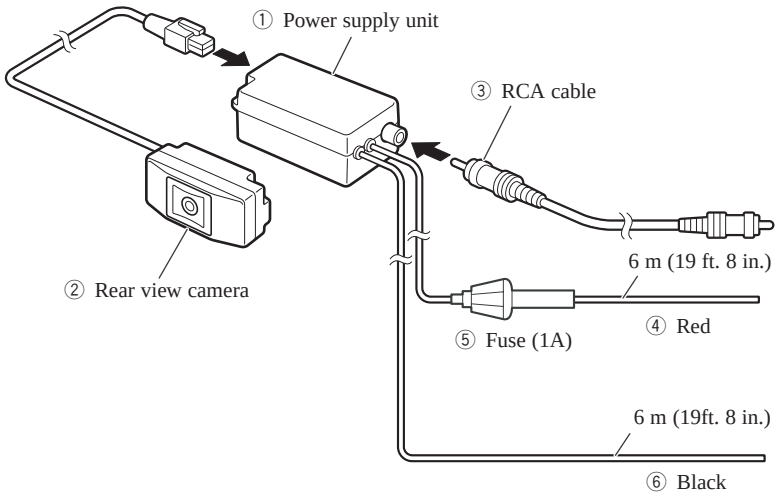
PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord	CZD5393
	2	Accessory Assy	CZE5016
	3	Attachment Assy	CEA4582
*	4	Clamper	CNV8262
*	5	Polyethylene Bag	E36-615
*	6	Polyethylene Bag	CZE5019
	7	Double Sided Tape	CZN7020
	8	Packing	CZN7021
	9	Fastener	CZN7022
	10	Blister Pack	CZH5368
	11	Board	CZH5370
	12	Contain Box	CZH5390
	13	Board	CZH5389
	14	Camera Assy	CZX5105
	15	Battery Box Assy	CZX5106
	16	Strap Assy	CZX5107
	17	Screw Assy(M3x4)	CZE5017
*	18	Polyethylene Bag	CZE5018
	19	Strap	CZN7018
	20	Owner's Manual	CZR5019
	21	Owner's Manual	CZR5021

Owner's Manual

Part No.	Language
CZR5019	English, Spanish, German, French, Italian, Portuguese(B)
CZR5021	Traditional Chinese, Arabic

OPERATIONS



Connection sample

①Power supply unit
②Rear view camera

Video input jack

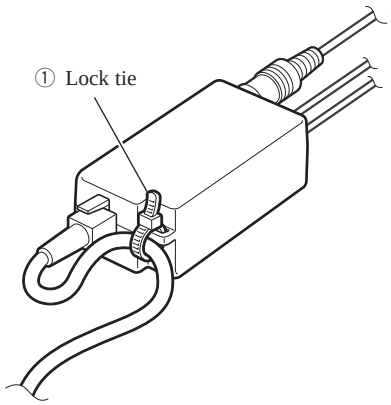
Connect to video input jack.
③RCA cable

Accessory power supply

To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
④Red
⑤Fuse (1A)

Ground

To vehicle (metal) body.
⑥Black



Installation with a lock tie

When connecting the rear view camera and the power supply unit, secure the cord to the power supply unit with the lock tie.
①Lock tie